

L' AOC informatisé: un moyen de prévention et de management



C.Jacot, E.Sánchez-Corral, L. Symons

Avec la complicité du groupe de travail AOC:

G.Daems AB, P.Frandsen AT,L.Jacob-Rols IT,C.Pividori TIS,
P.Schilly EP, G.Thiede AS, M.Vadon TIS, M. Vitasse AB

L' AOC informatisé:

	INSTRUCTION DE SÉCURITÉ SAFETY INSTRUCTION	IS 39 Rév. 1
Edms 335804		
Edité par: TIS/GS	Date de publication: mars 2000	Original: français
AVIS D'OUVERTURE DE CHANTIER (AOC)		

- **Le formulaire « AOC », selon l'IS 39**
 - **Pourquoi informatiser ce formulaire ?**
 - **Groupe de travail : son mandat**
 - **Déroulement et Statut du Projet**
 - **Plan d'Action: "Phase Pilote" et Mise en service**
- "AOC phase II"**

CERN Document Server - Document ID: 335804 Date: 03/03/00

AVIS D'OUVERTURE DE CHANTIER (AOC)
à établir par le superviseur de l'exécution et à diffuser 3 semaines
avant le début des travaux ou au plus tôt en cas d'urgence⁽¹⁾

1. Nous nous engageons que le groupe ST/CE assurera le suivi suivant :

2173 - SM18 - Circuit eau déminéralisée Tests Bench
SM18 - Circuit air comprimé Tests Bench

Date de commencement : 17/03/003 Ref. com. CERN/ST/CE/3637

Chiffres identifiants : Durée estimée : 4 mois

2. Maîtrise d'oeuvre et supervision seront assurées comme suit :

Chef de groupe/section CERN responsable : PIROLLET.Bernard Tel. 76211 Natel 16.0102.
Superviseur de l'exécution : PIROLLET.Bernard Tel. 76211 Natel 16.0102.
Charge de la coordination générale : SIEMKO.Andrzej Tel. 78649 Natel 16.3882.

Le formulaire « AOC », selon l'IS 39 a pour objectif:



- identifier la maîtrise d'œuvre et les superviseurs
- définir les particularités du chantier
- aider le superviseur dans l'analyse des risques et des contraintes et proposer des mesures compensatoires
- sélectionner et déclarer les entreprises exécutantes
- diffuser pour aviser de l'ouverture d'un chantier

Pourquoi informatiser ce formulaire ?



■ **Assister le rédacteur et le guider dans les démarches à partir d'un système EDH:**

- Recherche de données, importation et liens avec d'autres documents
- Aide dans l'identification des risques et des mesures de prévention
- Information envoyée aux services concernés : avis, accords, consignations d'équipements
- Suivi et gestion des coactivités
- Diffusion électronique selon un routage et liste de distribution

Pourquoi informatiser ce formulaire ?

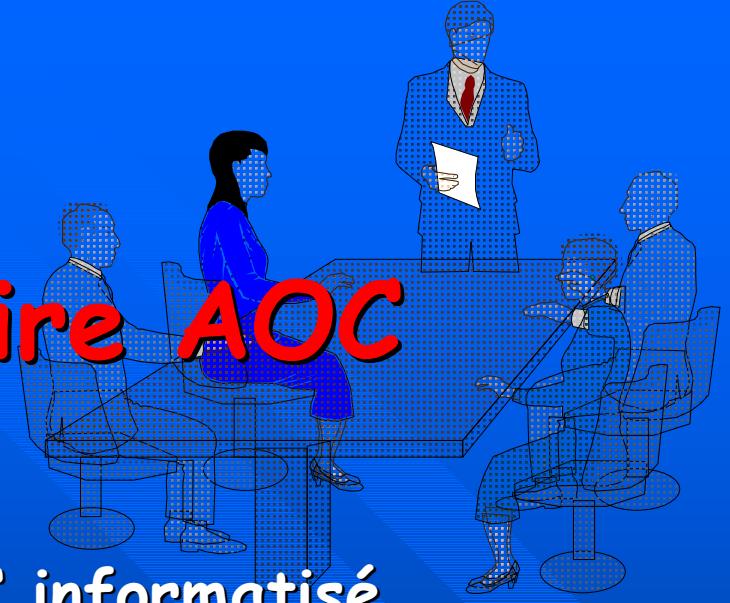
- **Assister les managers comme système unique de suivi et gestion:**



- Engagement des entreprises et des groupes CERN
- Planification des travaux et des lieux
- Recherches d'informations selon critères de tri:
Dates, lieux, groupes/entreprises, risques, coactivités
- Sauvegarde et archivage centralisés
- Outil d'analyse et de statistiques et de planification:
sécurité, mesures de prévention, rapports d'activités, investissements

Groupe de travail : son mandat

■ Analyser le formulaire AOC selon IS 39:



- Définir les besoins pour un AOC informatisé
- Préparer une spécification fonctionnelle
- Suivre le développement du projet EDH
- Aider à la mise en service dans les divisions
- Suivre l'évolution et l'intégration avec d'autres documents de sécurité ou de management

Project Status

User Requirements Collection AOC WG, ST AOC prototype	May-June 2002
Project definition Report and Request for Support to AS/EDH team	3 rd July 2002
Specification: Interfaces external databases (Patrimony, CFU), Users' Requirements Document, User Interface specification	July-October 2002
Specification accepted by AS	November 2002
Design and Development: <ul style="list-style-type: none"> ■ CFU/ Safety Module and Documents on Completion , Integration of risks in Patrimony db ■ AOC-EDH 	September - October 2002 September - March 2003
Tests and Validation (AOC v.1) By ST AOC team	February-March 2003
ST Pilot (CV, EL, HM, CE + TIS)	10 th March 2003
Other divisions	End-April 2003
Production	Mid-May 2003

AOC system (1)

■ Design and development

- Data validity and consistency
- Guide, ease AOC construction
- Assure confidentiality and security issues:
 - create/modify + read: only privileged users (AOC creator)
 - EDH users can read AOCs non confidential data

■ IS 39 – AOC EDH doc

- AOC New Release
- AOC Complement
- Work Package/Unit
- Location
- Asbestos & chemical risks associated to location
- Risks/Preventive measures "TIS catalogue"
 - Work
 - Environment
- CFU/Contract safety information
- Co-activity management

The screenshot displays the AOC (Avis D'ouverture de Chantier) document creation interface. At the top, the title bar reads "Avis D'ouverture De Chantier (AOC) 1224644 - Microsoft Internet Explorer provided by CERN". The main content area is divided into several sections:

- Co-Activity Report:** Includes fields for "Co-Activities" (set to "Yes") and a note about the start of work by the group ST-DI GROUPE GESTION & ORGANISATION.
- Fields with asterisks (*) are obligatory and must be filled in:** Includes "Work Category" (Categorie 1 (TIS-GS98-10)), "Work Description" (travaux electriques), "Requested by" (Gilbert DAEMS (AB-ADM)), "Work Package", "Work Unit", "Start Date" (03.04.2003), and "Duration" (62 Days).
- Location:** Shows "Location" (bldg 102), "GPS Latitude", "GPS Longitude", "Building Description" (SURFACE TREATMENT WORKSHOP NUMBER 1), and "Co-ordinates" (J25.18 Visualisation).
- Special hazards existing in the area affected:**

Risks	Preventive Measures	Other Preventive Measures
Installations électriques sous tension		Habilitation UTE C18510
Travaux souterrains	Port Biocell obligatoire Port obligatoire des EPI (casque, gants, chaussures,...)	
- Asbestos Risks:** Lists materials containing asbestos: AMIANTE CIMENT sur COUVERTURE - Matériaux Suspects and BANDELETTE sur CONDUITE - Matériaux Suspects.
- Chemical Risks:** Lists various chemical hazards including PERSULFATE D'AMMONIUM, NITRATE DE POTASSIUM, LIQUIDE ALCALIN CAUSTIQUE, ACIDE CHROMIQUE, LIQUIDE CORROSIF, ACIDE CHLORHYDRIQUE, SOLUTION D'HYDROXYDE DE SODIUM, CYANURE EN SOLUTION, LIQUIDE INFLAMMABLE, TOXIQUE, PEROXYDE D'HYDROGENE, ACIDE NITRIQUE, ACIDE SULFURIQUE, LIQUIDE INORGANIQUE, CORROSIF, ACIDE, N.S.A., LIQUIDE INORGANIQUE, TOXIQUE, N.S.A., and SOLIDES INORGANIQUE, TOXIQUE.

AOC system functionality (2)

■ CFU/Contract Safety Information and Documents on Completion

- Work category: 1, 2
 - Existing documents:
 - Contract: PGC, PDP
 - Firms: PPSPS, DOC
- ## ■ IS 39 – AOC EDH doc

Work Activities:

- Contract/DAI: firms concerned
- Description, start/end dates
- CFU Contract/Firm safety information
- Applicable safety documents guide

1 avril 2003

The screenshot displays two windows of the AOC system. The top window is titled 'Safety documents and Documents on Completion' and shows a table with one row:

Reference	Description	Effective From	Effective To	Works Category 1	Document PGC	Works Category 2	Document PdP
C168/ST	SOFTWARE SUPPORT FOR INDUSTRIAL CONTROLS	08/01/2001	31/12/2003	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The bottom window is titled 'Avis D'Ouverture De Chantier (AOC) - Line 1' and shows a form with various fields. One field, 'Existing Safety Documents', is circled in red. A red arrow points from this field to the 'Document PGC' column in the top table.

AOC system functionality (3)

■ AOC co-activity management

- Detect, trace, solve
- Criteria: *work in same location at the same time*

Work Task and Company Information

Task Number :	1																
Task Description :	DO																
Type of Order :	Contract																
Contract / DAI Number :	C170/00																
Company Name :	SPIE TRINDEL, 236 RUE THOMAS EDISON																
Company Address :																	
Company Phone Number :																	
Company's Works Responsible :																	
Applicable Safety Documents :	Specific AOC RdP to be written by the Works Supervisor and the firm																
Start Date	End Date	Possible Conflicts :															
13.03.2003	13.06.2003	<table border="1"> <thead> <tr> <th>Document Number</th> <th>Start Date</th> <th>End Date</th> </tr> </thead> <tbody> <tr> <td>ST-DI/2003/41</td> <td>01.03.2003</td> <td>31.03.2003</td> </tr> <tr> <td>AB-ADM/2003/141</td> <td>03.04.2003</td> <td>04.06.2003</td> </tr> <tr> <td>AB-ADM/2003/141</td> <td>03.04.2003</td> <td>04.06.2003</td> </tr> <tr> <td>AB-ADM/2003/161</td> <td>03.05.2003</td> <td>30.06.2003</td> </tr> </tbody> </table>	Document Number	Start Date	End Date	ST-DI/2003/41	01.03.2003	31.03.2003	AB-ADM/2003/141	03.04.2003	04.06.2003	AB-ADM/2003/141	03.04.2003	04.06.2003	AB-ADM/2003/161	03.05.2003	30.06.2003
Document Number	Start Date	End Date															
ST-DI/2003/41	01.03.2003	31.03.2003															
AB-ADM/2003/141	03.04.2003	04.06.2003															
AB-ADM/2003/141	03.04.2003	04.06.2003															
AB-ADM/2003/161	03.05.2003	30.06.2003															
Click to add a new line item Add																	

Avis D'Ouverture De Chantier (AOC)
 AOC Document Number : ST-DI/2003/41
 EDH Document Number : 1221724

Co-Activity Report

Co-Activities: Yes

Test System Avis D'Ouverture De Chantier (AOC)
 Co-Activity Management for AOC Document [221235](#) Task 1

Task 1 Overall Co-activity status: **Unresolved!**

Co-Activity Number 1

Co-activity detected:	Does the co-activity cause a real conflict?	Works Supervisor of Conflicting Document:	Conflicting document	Overall Co-Activity Status:
<input checked="" type="checkbox"/> Y	<input checked="" type="checkbox"/> Currently unresolved	Jozef Dransfield	123423 Task 3	Unresolved

Currently States Co-activity is un-resolved

Solving Problem Report:
 On 14/03/2002 Jozef Dransfield Wrote :
 Hello
 On 15/03/2002 Bill Wrote :
 Hello to you two

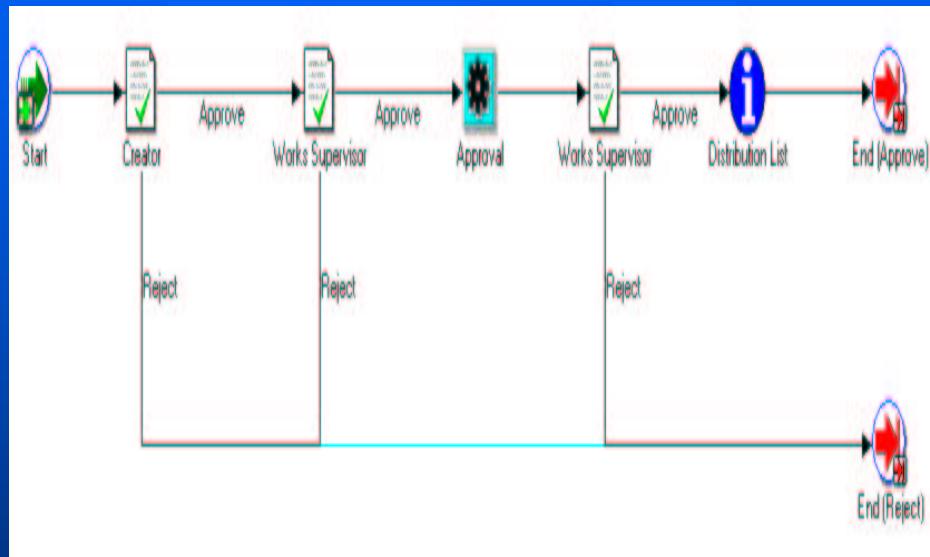
Add Comment :

[Add Comments](#) [Send Mail to Inform](#)

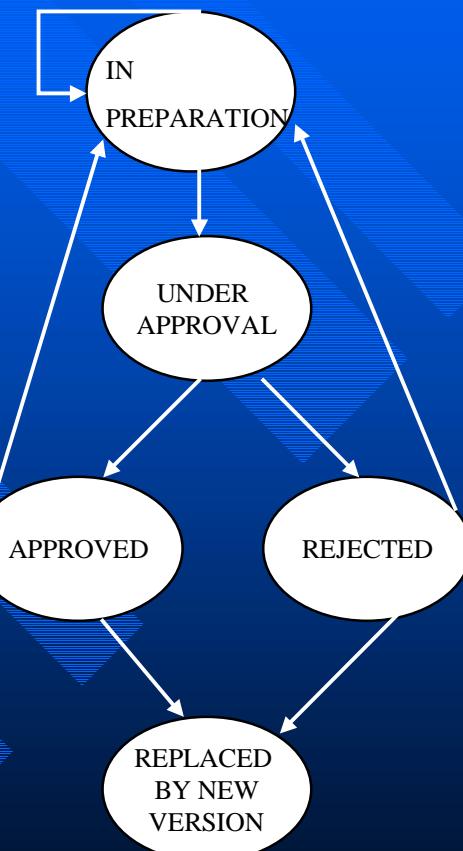
[Done, but with errors on page.](#) [Local intranet](#)

AOC system functionality (4)

- AOC-EDH Workflow



- AOC Document life-cycle



AOC system functionality (5)

■ AOC Summary Report

Screenshot of the AOC Document Summary page in Microsoft Internet Explorer.

The page title is "AOC Document Summary".

Form fields include:

- Document Number: [Text Box]
- Requestor: [Text Box]
- GPS Latitude: [Text Box]
- Work Package: [Text Box]
- Creation Date: [Text Box]
- Responsible Division: [Text Box]
- Work Catagory: [Text Box] (highlighted with a red circle)
- AOC Number: [Text Box]
- Works Supervisor: [Text Box]
- GPS Longitude: [Text Box]
- Work Unit: [Text Box]
- Requesting Division: [Text Box]
- Location: [Text Box]

Buttons: Reset, Retrieve

Table:

Document Number	AOC Number	Work Package	Work Unit	GPS Latitude	GPS Longitude	Requestor Full Name	Works Supervisor Full Name	Requesting Division	Responsible Division	Location	Works Category
1231896	AB-ATB-EET/2003/281					Paolo CENNINI	Kussy Suku SETAS	AB	ST	375	Category 2
1230781	EST-SM-DA/2003/241					Pedro COSTA D'ALTO	Bernard LOUCHET	EST	ST	181	Category 2

AOC system functionality (6)

■ AOC Work Tasks Summary Report

AOC Task Summary

Document Number: ? AOC Number: ?
Company Status: All ? DAI Number: ?
Company Name: ? Percent Complete : ?
Start Date: ? End Date: ?
Co-Activity Status: All ? In progress : All ?
Location: ?

bldg 102

Reset Retrieve

Document Number	Company Status	Contract DAI	Short Description	Start Date	End Date	Task Number	AOC Number	Co Activity Exists	Progress (%)	Company Name	Location
1221724	Contract	F472/00	Knock a wall down	01.03.2003	31.03.2003	0	ST-DI/2003/41	Y	100	AIR ET CHALEUR S.A.	102
1224470	Contract	C170/00	DO	13.03.2003	13.06.2003	0	AB-ADM/2003/101	Y	20	SPIE TRINDEL	102
1224644	Contract	C170/00	DEED	03.04.2003	04.06.2003	0	AB-ADM/2003/141	Y	0	SPIE TRINDFI	102

Action Plan

- ST pilot : 10/3/03 – 17/4/03
 - Participants:
 - » CV (2), HM (1), EL (2), CE (3)
 - » TIS (2)
 - Training: 6/3/03
 - Tests: 2 weeks
 - Analysis feedback: 1 week, meeting 27/03/03
 - Report sent to EDH team: 27/3/03
 - **Follow-up and Validation !**

Action Plan: Deployment ₍₂₎

- CFU Contract information: *contract managers' responsibility*
 - Contract firms up to date -> inform SPL
 - Contract Safety Documents
 - » Locate documents in EDMS
- Divisions: identify “AOC creators” and persons needed READ access
- AOC on-line Help
 - Divisions, EDH team
- Training users (CFU, AOC)
 - By ST AOC team (+ TIS ?) & EDH team
- AOC French version
 - Once English version validated

Action Plan ₍₃₎

- AOC Phase II (*to be defined with TIS and AS Division*)
 - Homogeneity with related EDH documents:
 - Level 3 Alarms IS 37, Fire Permit
 - Create a common framework
 - Link to other documents:
 - Confined spaces, Asbestos permit, Work permits
 - Interface with works planning
 - » EVM
 - » LHC installation
 - » Accelerators' shutdown schedule

AOC system functionality (new)

■ AOC Summary Report

The screenshot shows a Microsoft Internet Explorer window titled "AOC Document Summary - Microsoft Internet Explorer provided by CERN". The address bar contains the URL <https://aisws5.cern.ch/servlet/cern.edh.I5395Summary.I5395SummaryServlet>. The page itself is titled "AOC Document Summary" and features a "Test System" logo. It contains a form with various input fields and dropdown menus. The fields include:

Document Number:	<input type="text"/>	AOC Number:	<input type="text"/>
Requestor:	<input type="text"/>	Works Supervisor:	<input type="text"/>
Location:	<input type="text"/>	GPS Longitude:	<input type="text"/>
GPS Latitude:	<input type="text"/>	Work Unit:	<input type="text"/>
Work Package:	<input type="text"/>	Requesting Division:	<input type="text"/>
Creation Date:	<input type="text"/>	Work Category:	All <input type="button" value="▼"/>
Responsible Division:	<input type="text"/>		

At the bottom of the form are two buttons: "Reset" and "Retrieve".

AOC system functionality (new)

■ AOC Work Tasks Summary Report

The screenshot shows the 'AOC Task Summary' page from a Microsoft Internet Explorer browser window. The title bar reads 'AOC Task Summary - Microsoft Internet Explorer provided by CERN'. The address bar shows the URL: 'https://aisws5.cern.ch/servlet/cern.edh.IS39Summary.IS39TasksServlet'. The main content area has a light green header with the text 'Test System' and 'AOC Task Summary'. Below this, there is a form with various input fields and dropdown menus. The fields include:

- Document Number: [Text Box] ?
- Location: [Text Box] ?
- Start Date: [Text Box] ?
- Contract Number: [Text Box] ?
- Company Name: [Text Box] ?
- Percent Work Complete: [Text Box] ?
- AOC Number: [Text Box] ?
- Co-Activity Status: [Dropdown] All ?
- End Date: [Text Box] ?
- DAI Number: [Text Box] ?
- Work in progress: [Dropdown] All ?

At the bottom of the form are two buttons: 'Reset' and 'Retrieve'. The status bar at the bottom of the browser window shows 'Local intranet'.

CFU Safety and Documents on Completion

(1)

Safety documents and Documents on Completion : Contract details - Microsoft Internet Explorer provided by CERN

User SANCHEZE

CONTRACT FOLLOW UP

Safety documents and Documents on Completion

Help Startup page

Reference	Description	Effective From	Effective To	Works Category 1	Document PGC	Works Category 2	Document PdP
C170/ST	ELECTRICAL INSTALLATION WORK	01/05/2001	30/06/2004	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Update Revert

Responsibles

Description	Last Name	First Name	Organic Unit	Tel.	Email	Xwho Info
Commercial responsible	PICCHIOLI	MARCEL	SPL-PS-SI	74248	Marcel.Picchioli@cern.ch	Xwho Info
Commercial Responsible (backup)	DE CAT	WILLIAM	SPL-PS-CO	77536	William.de.Cat@cern.ch	Xwho Info
Technical Responsible	PEDERSEN	JOHN	ST-EL	75468	John.Pedersen@cern.ch	Xwho Info

• Firms Documents (3 Rows)

Done Local intranet

Safety documents and Documents on Completion : Firms Documents - Microsoft Internet Explorer provided by CERN

User SANCHEZE

CONTRACT FOLLOW UP

Safety documents and Documents on Completion

Firms' Documents for [C170/ST](#)

Help Startup page

Safety Documents by Works Category as specified by TIS-GS/98-10

DoC = Document on Completion
PPSPS = Plan Particulier de Securite et de Protection de la Sante

Firm code	Firm name	Type	Start Date	End Date	Works Cat. 1	ppspS	Works Cat. 2	DoC
CONT03	CONTROLMATIC GMBH	Member of Consortium	01/05/2001	30/06/2004	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GR2S68	SPIE TRINDEL/F-CONTROLMATIC/DE	Contractor	01/05/2001	30/06/2004	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SPIE31	SPIE-TRINDEL	Head of consortium	01/05/2001	30/06/2004	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Records 1 to 3

Update Revert ReQuery Count

Done Local intranet

AOC system functionality (3)

Avis D'Ouverture De Chantier (AOC) - Microsoft Internet Explorer provided by CERN

AOC Complement <https://edms.cern.ch/file/377826>

This is to inform you that the will commence the following work

Fields with asterisks (*) are obligatory and must be filled in.

Works Category: *	Catégorie 2 (TIS-GS/98-10) ?
Work Description: *	Tunnel TT10 : Electricité et système de contrôle pour le nouveau ventilateur booster
Project/Work Package:	
Sub-Project/Work Unit:	
Start Date:	
End Date:	
Duration:	

Location*
 Location: bldg 868 (BA1) ?
 GPS Latitude:
 GPS Longitude:
 Building Description: AUXILIARY BUILDING BA1 AND PP1
 Co-ordinates: K27.g0 Visualisation

Project Engineering supervision and co-ordination will be provided as follows:

Group Leader:	Mats WILHELMSSON (ST-CV)
Section Leader:	
Works Supervisor: *	Maria Carmen MORODO TESTA (ST-CV-CE) ?
General Coordinator: *	Daniel GASSER (ST-CV-ET) ?
Safety Coordinator: *	Pierre Jean MORANGE ?
Planning Responsible: *	Maria Carmen MORODO TESTA (ST-CV-CE) ?
Local Supervisor: *	Maria Carmen MORODO TESTA (ST-CV-CE) ?

Division responsible for the works and the Head of Project

Executor:	Division: ST-CV-CE DSO: Claude JACOT (ST-DI) Safety Coordinator: ? Project Leader: Daniel GASSER (ST-CV-ET)
Requestor:	Division: ST-CV-TR Project Leader: Bernard PIROLLET (ST-CV-TR) ? DSO: Claude JACOT (ST-DI)

Recommendations, comments, agreement from the services concerned, and measures to be taken:

Electricity:	Anne FUNKEN (ST-EL-PM) ?
Cooling and Ventilation:	Rene BOURGEOIS (ST-CV-OP) ?
Communications:	Alasdair DAY (ST-MA-IN) ?
Survey:	Georges ROBIN
TSO:	
GLIMOS:	
Site Manager:	
FGSO:	
RSO:	
CSO:	
Environmental:	
Experimental Areas:	